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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/373,585	08/13/1999	NOBUHIKO OGURA	Q55432	2737

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EXAMINER

LU, FRANK WEI MIN

ART UNIT PAPER NUMBER

1634

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/373,585

Applicant(s)

OGURA, NOBUHIKO

Examiner

Frank W Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,7 and 21-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,7 and 21-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

CONTINUED EXAMINATION UNDER 37 CFR 1.114 AFTER FINAL REJECTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission of RCE and the amendment filed on December 13, 2004 have been entered. The claims pending in this application are claims 6, 7, and 21-29. Rejection and/or objection not reiterated from the previous office action are hereby withdrawn in view of amendment filed on December 13, 2004

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 6, 7, 21, 22, and 25-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Stimpson (US Patent No. 6,037,186, filed on July 16, 1997) as evidence by US Patent No. 4,877,745 (Hayes *et al.*, published on October 31, 1989).

Stimpson teaches parallel production of high density arrays.

Regarding claims 6, 22, 25, and 29, since Stimpson teaches that an automated device to Apply the multitude of reagents to a 21.5 foot sheet is assembled from an X-Y-Z table (e.g. Asymtek) fitted with a reagent dispenser, a step motor controlled take up spool and an adjustable drag pay-out spool (see column 8, third paragraph and Figure 2C), Stimpson discloses a conveyor recited in claim 6. Since Stimpson teaches that the roll of membrane is fed through guides on the X-Y-Z table surface and Y table of the automated device is flat (see column 8, third paragraph and Figure 2C), Stimpson discloses the apparatus (ie., the automated device) comprising a flat surface accommodating the she-like substrate as recited in claim 29. Since Stimpson teaches that, using reagent jet printing, lines of different DNA samples such as cDNA libraries are applied to the sheet in lines or otherwise a pin applicator so that multiple dots from the pin overlap to form a line wherein the different reagent lines on the sheet are formed as close together as possible and with minimum line width allowed by the printing method so that array density is maximized. For example, reagent jet printing is described in U.S. Pat. No. 4,877,745 and print lines with a width on the order of 0.001 inch (see column 7, lines 25-55). Since a plurality of jetting heads in the reagent jet printing taught by in US Patent No. 4,877,745 is arranged at predetermined or fixed interval (see US Patent No. 4,877,745, Figure 1), Stimpson as evidence by US Patent No. 4,877,745 (Hayes *et al.*,) teaches a plurality of applicators (ie., jetting heads) as recited in claims 6 and 25. Since the sheet with different DNA sample is cut with a razor blade (for example, see column 14, last paragraph), Stimpson discloses a cutting means as recited in claim 6. Although Stimpson as evidence by U.S. Pat. No. 4,877,745 (Hayes *et al.*,) does not specially indicate that their apparatus can perform the functions of the apparatus recited in claims 6 and 22, note that, while features of an apparatus may be recited either structurally or

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functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Exparte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (see MPEP 2114).

Regarding claims 7, 21, 27, and 28, since claim 6 is directed to an apparatus for manufacturing a test piece for use in biological analysis of a sample organism comprising a strip-like substrate bearing thereon numbers of known specific binding agents which are different from each other and are arranged in a line at predetermined intervals in the longitudinal direction of the strip-like substrate, the test piece recited in claim 6, the binding agents recited in claims 6, 7, 21, and 27, and the strip-like substrate recited in claims 6, 21, and 28 are not parts of the apparatus as recited in claim 6 and claims 7, 21, 27, and 28 are used to further limit the binding agents and the strip-like substrate recited in claim 6. Therefore, claims 7, 21, 27, and 28 are anticipated by Stimpson as evidence by US Patent No. 4,877,745.

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Regarding claim 26, since Stimpson teaches that an automated device to apply the multitude of reagents to a 21.5 foot sheet is assembled from an X-Y-Z table (e.g. Asymtek) fitted with a reagent dispenser, a step motor controlled take up spool and an adjustable drag pay-out spool (see column 8, third paragraph and Figure 2C), Stimpson discloses a conveyor means recited in claim 26. Since Stimpson teaches that, using reagent jet printing, lines of different DNA samples such as cDNA libraries are applied to the sheet in lines or otherwise a pin applicator so that multiple dots from the pin overlap to form a line wherein the different reagent lines on the sheet are formed as close together as possible and with minimum line width allowed by the printing method so that array density is maximized. For example, reagent jet printing is described in U.S. Pat. No. 4,877,745 and print lines with a width on the order of 0.001 inch (see column 7, lines 25-55). Since a plurality of jetting heads in the reagent jet printing taught by in US Patent No. 4,877,745 is arranged at predetermined or fixed interval (see US Patent No. 4,877,745, Figure 1), Stimpson as evidence by US Patent No. 4,877,745 (Hayes *et al.*), teaches a plurality of applicators means (ie., jetting heads) as recited in claim 26. Since the sheet with different DNA sample is cut with a razor blade (for example, see column 14, last paragraph), Stimpson discloses a cutting means as recited in claim 26.

Therefore, Stimpson as evidence by US Patent No. 4,877,745 teaches all limitations recited in claims 6, 7, 21, 22, and 25-29.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stimpson (July 16, 1997) as evidence by US Patent No. 4,877,745 as applied to claims 6, 7, 21, 22, and 25 above, and further in view of Shuminov (US Patent No. 5,808,554, 102(e) date: July 2, 1997).

The teachings of Stimpson have been summarized previously, *supra*.

Stimpson does not disclose a conveyor belt as recited in claim 23 and a guide rail as recited in claim 24. Since Stimpson teach that the sheet with different DNA samples is cut with a razor blade (for example, see column 14, last paragraph), the cutting means (ie., the razor blade) must have a cutting edge as recited in claim 24.

Shuminov teaches a conveyor belt and a guide rail. He teaches moisture detecting liner for a diaper and a process for manufacture thereof a production line for manufacturing the diaper. Figure 4a shows schematically a production line for manufacturing the diaper. The production line comprises a drum 48 constituting a first roll, which feeds a tissue-type material 49 under a guide rail 50 so that, as the absorbent layer 45 passes underneath the **guide rail 50**, the tissue-type layer 49 is compacted on to the absorbent layer 45 thus forming a composite layer which is cut by a **cutter 51** so that the tissue-type layer 49 extends along the complete length of the absorbent layer 45 and across the narrow section of its I-shaped contour. The composite layer passes along the **conveyor belt 46**, downstream of which are disposed, on opposite sides of the conveyor belt 46, a pair of drums 52 and 53 constituting, respectively, second and third rolls, which feed corresponding innermost and outermost layer material 54 and 55 so as to cover

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opposite surfaces of the composite layer comprising the absorbent layer 45 and the tissue-type layer 49. The resulting assembly is cut by a cutter 56 so as to produce the finished diaper (see Figure 4a and column 6, lines 5-21). The phrase “wherein said cutting edge moves along said guide rail” recited in claim 24 is a function of the cutting edge and is not a structural limitation.

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have added a conveyor belt as recited in claim 23 and a guide rail as recited in claim 24 into the apparatus recited in claim 6 in view of the patents of Stimpson and Shuminov. One having ordinary skill in the art would have been motivated to do so because addition of a guide rail and a conveyor belt onto the apparatus recited in claim 6 would add more functions onto the apparatus recited in claim 6 such as compacting a sheet (ie., a composition layer) by passing the sheet underneath of the guide rail and delivering a sheet (ie., a composition layer) to a cutter using the conveyor belt so that the sheet is cut to a designed size (ie., finished diaper) (see Shuminov, column 6, lines 5-21). One having ordinary skill in the art at the time the invention was made would have been a reasonable expectation of success to add a conveyor belt as recited in claim 23 and a guide rail as recited in claim 24 into the apparatus recited in claim 6.

Conclusion

5. No claim is allowed.
6. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30

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(November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is 571-272-0746. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached on (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Chemical Matrix receptionist whose telephone number is (703) 308-0196.

Frank Lu
PSA
January 7, 2005


FRANK LU
PATENT EXAMINER